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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,971	12/10/2003	William Fredenburg	112025-0164C1	6456
24267	7590	06/08/2006	EXAMINER	
CESARI AND MCKENNA, LLP			URICK, MATTHEW T	
88 BLACK FALCON AVENUE			ART UNIT	
BOSTON, MA 02210			PAPER NUMBER	

2113

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/731,971	<b>Applicant(s)</b> FREDENBURG ET AL.	
	<b>Examiner</b> Matt Urick	<b>Art Unit</b> 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Non-Final Official Action***

***Status of the Claims***

Claim 17 is rejected under 35 USC 101.

Claims 1-15 are rejected under 35 USC 102.

Claims 16 is rejected under 35 USC 103.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The limitations “Electromagnetic signals propagating on a computer network” and “electromagnetic signals carrying instructions” are considered non-statutory under 35 USC 101.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Peterson (US Patent 5,168,499).

As per claim 1, Peterson discloses:

Apparatus for enhancing debug capability in a multiprocessor circuit, comprising:  
a plurality of processors arranged so that the data advances from processor to processor during normal operation (column 6 lines 51-57: a systolic array advances data in a pipeline);

an advancement circuit, the advancement circuit enabling advancement of data among the processors in the event of a failure of a processor (column 7 lines 7-20); and

a data bypass circuit to pass the data past a failed one of the processors (column 7 lines 7-20).

As per claim 2, Peterson discloses:

The apparatus as in claim 1, wherein said data bypass circuit further comprises:  
a bypass register (column 7 lines 15-20).

As per claim 3, Peterson discloses:

The apparatus as in claim 1, further comprising:  
said plurality of processors arranged to process data as a pipeline (column 6 lines 51-57: a systolic array advances data in a pipeline, also see column 7 lines 21-25).

As per claim 4, Peterson discloses:

The apparatus as in claim 1, further comprising:

said plurality of processors arranged to process data as a pipeline (column 6 lines 51-57: a systolic array advances data in a pipeline, also see column 7 lines 21-25);  
and

a bypass register, said bypass register having a bit location for each processor of the pipeline, each bit location capable of storing an override signal (column 5 lines 15-20).

As per claim 5, Peterson discloses:

The apparatus as in claim 1, further comprising:

a memory, said memory storing computer code, said computer code having a code entry point selected by said data bypass circuit to enable a downstream processor to do the work of a failed processor (column 6 lines 35-55).

Claim 6 is rejected as the method for using the system of claim 1.

Claim 7 is rejected as the method for using the system of claim 2.

Claim 8 is rejected as the method for using the system of claim 3.

Claim 9 is rejected as the method for using the system of claim 4.

Claim 10 is rejected as the method for using the system of claim 5.

Claim 11 is rejected as the means plus function embodiment of the system of claim 1.

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Claim 12 is rejected as the means plus function embodiment of the system of claim 2.

Claim 13 is rejected as the means plus function embodiment of the system of claim 3.

Claim 14 is rejected as the means plus function embodiment of the system of claim 4.

Claim 15 is rejected as the means plus function embodiment of the system of claim 5.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson in view of Tanenbaum (*Structured Computer Organization*, Third Edition).

Tanenbaum discloses that any operation performed by software can also be implemented as hardware, and that this the designer of the system may make the decision based on personal preferences (page 11 ¶ 4 - ¶ 5). Peterson discloses that his

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invention is in the form of an integrated circuit (column 5 lines 62-66). This circuit could contain either hardware or software instructions in order to perform the disclosed methods, as chosen by the designer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to implement the system of Peterson as software (or hardware) as a preference of the designer.

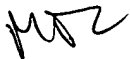
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt Urick whose telephone number is (571) 272-0805. The examiner can normally be reached on 8:00 - 4:30.

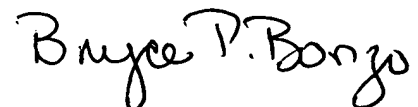
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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**BRYCE P. BONZO**  
**PRIMARY EXAMINER**